Chapter 2

General Radiographic Units
Fixed and Portable

Minimum Required Personnel Qualifications:

Level 1 (Basic X-Ray Surveyor)

Testing Periodicity:

1.	Ashore Facilities:	Annually
2.	Afloat Units:	Every 24 months
3.	Deployed medical units:	Prior to fielding
4.	Hospital ships:	Annually
5.	Veterinary clinics:	Every 24 months
7.	All units:	Upon acceptance

Instrumentation:

1. Electrometer with small ion chamber
2. Level
3. kVp meter
4. Light meter
5. Type 1100 10 x 10 cm Aluminum plates (9 mm total, three 2 mm, two 1.0 mm, two 0.5 mm thicknesses)
6. Timer tester (may be part of exposure meter)
7. Focal spot test tools (one of the following)
   a. slit camera
   b. right cylinder power target
   c. Siemens Star (1.0 degree)
8. Acrylic 2 cm thickness 10 x 10 cm plates (3 each)
9. Collimator test tool (one of the following)
   a. copper plate (marked from center to edge in either centimeters or inches)
   b. Five coins
10. X-ray beam alignment test tool (if available)
11. AEC Backup Timer Test Tool: Lead plate (at least 3.2 mm x 20 x 20 cm)
12. Tape measure
13. Cardboard cassette or ready pack film
14. Copper plate, 1.6 mm x 10 x 10 cm
15. Optional
    a. BRH test stand
    b. AEC test cassette

References

1. AAPM Report 31, *Standardized Methods for Measuring Diagnostic X-ray Exposures.* 1990.
2. Code of Federal Regulations, Title 21, Chapter 1, Section 1020.30, 1020.31, 1020.32; 3 May 1993 edition.
3. Curry, T.S. III, Dowdey J.E., Murry, R.C. Jr. *Christensen's Physics of Diagnostic Radiology*. Lea & Febiger, Philadelphia. 1990.
4. Gray, J.E., Winkler, N.T., Stears, J., Frank, E.D. *Quality Control in Diagnostic Imaging*; University Park Press, Baltimore, 1983.
5. Hendee, W.R., Chaney, E.L., Rossi, R.P. *Radiologic Physics, Equipment and Quality Control*, Year Book Medical Publishers, Inc., Chicago, 1977.
6. NCRP Report 99, *Quality Assurance for Diagnostic Imaging Equipment*, National Council on Radiation Protection and Measurements, Bethesda, 1988.